



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/400,764

09/21/1999

TIMOTHY J. MOULSLEY

PHB-34.288

3782

24737

7590

07/01/2004

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

TRAN, TUAN A

ART UNIT

PAPER NUMBER

2682

21

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/400,764

Applicant(s)

MOULSLEY, TIMOTHY J.

Examiner

Tuan A Tran

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5, 8-20 and 22-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5, 8-20 and 22-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 2-5, 8-20 and 22-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flammer (5,465,398) in view of Hamabe (5,396,649).

Regarding claim 5, Flammer discloses a digital wireless communication system (See fig. 1 and col. 1 lines 5-12) comprising: at least one transmitter 4 having means for transmitting first units information at a first power level; at least one receiver 6 for receiving the transmitted information units; control means 9 for controlling the transmitter output power; and monitoring means 9 for monitoring if correction reception of the transmitted units occurred at the receiver 6, wherein the transmitting means transmits second information units associated with the first information units for which first information units the monitoring means does not indicate correct reception has occurred, the second information units being transmitted at a second power level that is greater than the first power level, the second power level being selected by the control means, and wherein the second information units allow the content of the first information units to be established (See figs. 1, 5 and col. 3 lines 13-34, col. 5 lines 6-20). However, Flammer does not mention that the first power level is selected to

Art Unit: 2682

increase a probability of failed first information unit transmission and of consequent second information unit transmission and to minimize average power consumption taking into account the first power level and the second power level, the first power level being the lowest level to correspond to a maximum allowable probability of failed first information unit transmission and of consequent second information unit transmission. Hamabe teaches to select transmission power in sequential steps from a minimum transmission power level up to a maximum transmission power level (See col. 3 lines 50-57), wherein the minimum transmission power level inherently correspond to a maximum probability of failed transmission, and wherein average power consumption taking into account the first power level and the second power level is inherently being minimized. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Hamabe's teachings in arranging the transmitter, as disclosed by Flammer, by transmitting the first information unit at the lowest power level to increase probability of failed first information unit transmission and of consequent second information unit transmission to a maximum allowable probability, and further to minimize the average power consumption, for the advantage of decreasing level of channel interference to enhance the quality of service and conserving the power.

Claims 12-13 and 15 are rejected for the same reasons as set forth in claim 5, as apparatus.

Claims 14, 18-19, and 32 are rejected for the same reasons as set forth in claim 5.

Art Unit: 2682

Regarding claims 8-9, Flammer & Hamabe disclose as cited in claim 12.

Flammer further discloses the content of the second information units is the same as the content of the first information units (See fig. 5 and col. 5 lines 18-20).

Claims 2 and 22 are rejected for the same reasons as set forth in claims 8-9, as method.

Regarding claim 3, Flammer & Hamabe disclose as cited in claim 5. Flammer further discloses the information units are data packets (See col. 3 lines 25-34).

Claim 28 is rejected for the same reasons as set forth in claim 3.

Regarding claim 4, Flammer further discloses that the step of monitoring is performed by the transmitting station based on information provided by the receiving station (See fig. 5 and col. 5 lines 18-20).

Claim 29 is rejected for the same reasons as set forth in claim 4.

Regarding claims 10-11, Flammer & Hamabe disclose as cited in claim 12.

Flammer further discloses the communication system is a wireless LAN communication system wherein the transmitter station is employed as a component of the system (See fig. 1 and Abstract), and Hamabe further suggests that transmission power control is performed in a cellular mobile radio telephone system (See col. 2 lines 51-53); therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the digital wireless communication system as disclosed by Flammer & Hamabe as an cellular communication system for the advantage of expanding the capability of the system to various wireless environments.

Regarding claim 16-17, Flammer & Hamabe discloses as cited in claim 5.

However, they do not mention that the second information units include forward error correction information associated with the first information units, wherein the forward error correction information is enhanced. Flammer further discloses the transmitting station 4 has a capable of transmitting second information units to compensate for the errors occurred during the transmission of the first information units (See col. 4 lines 16-24). Forward error correction and the technique of embedding the forward error correction in the transmitted packet are well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply this technique by including enhanced forward error correction information into the information that is retransmitted to compensate for the errors occurred in the previous transmission for the advantage of allowing the receiving end to receive correct data.

Claims 24-27 are rejected for the same reasons as set forth in claims 16-17.

Regarding claim 20, Flammer & Hamabe discloses as cited in claim 5, Flammer further discloses the first information is of the nature that must received in real-time by a user (See col. 3 lines 35-53). However, they do not mention that the second information is transmitted sufficiently quickly so that a delay perceived by the user in successful reception of the first traffic information is below a desired threshold. Keeping the delay between two transmissions well within a predetermined threshold in a particular communication is a common practice in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to establish this step in order to speed-up data exchanging process as well as saving power.

Regarding claim 23, Flammer & Hamabe disclose as cited in claim 20. Flammer further discloses the transmitting station 4 has a capable of transmitting second information units to compensate for the errors occurred during the transmission of the first information units (See col. 4 lines 16-24, col. 5 lines 17-21) and the content of the second information units is the same as the content of the first information units. However, they do not mention that the second information comprises a portion of the content of the first transmission units. There are two obvious ways to compensate for the errors occurred during the transmission of the first information unit: one is retransmitting the whole content of the first information unit to replace for the content that has errors, and the other is retransmitting a portion of content to compensate for just the occurred error portion of content; therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the transmitting station to transmit the second information comprising a portion of the content of the first information units in order to save spectrum as well as power.

Regarding claim 30, Flammer & Hamabe disclose as cited in claim 20. Flammer further discloses transmitting second information unit comprises a plurality of transmissions of further information (See fig. 5), wherein the plurality of transmissions is inherently equal or less than a threshold number, which the threshold number inherently depends upon a battery capacity of the transmitting station.

Regarding claim 31, Flammer & Hamabe disclose as cited in claim 20. However they do not mention that transmitting of first information comprises at least one retransmission at the first power level prior to the transmission of the second

Art Unit: 2682

information. Retransmission information upon receiving NAK (negative acknowledgement) at the same power level is well known in the art, therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to establish this step in order to avoid unnecessary power increasing to save power as well as to reduce interference of the network in general.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Smith et al. (5,266,922) discloses mobile communication apparatus.
- Hulbert (5,713,074) discloses mobile radio power control device using comparison of retransmitted data.
- Haartsen et al. (6,519,236) discloses automatic power control in uncoordinated frequency-hopping radio systems.
- Agrawal et al. (5,722,051) discloses adaptive power control and coding scheme for mobile radio systems.
- Hulyalkar et al. (6,069,901) discloses use of energy burst for wireless network.

Response to Arguments

Applicant's arguments filed 04/11/2004 have been fully considered but they are not persuasive.

a. The Applicant argued that one of ordinary skill in the art would not combine Flammer and Hamabe because Flammer relates to the field of wireless LAN



Art Unit: 2682

communication while Hamabe relates to the field of cellular mobile station (See Remark, page 11 and page 12). In response to the Applicant's argument, wireless LAN communication as cited by Flammer is an additional feature and does not constitute the whole invention. Flammer's invention relates to the field of wireless packet communication link (See col. 6 lines 23-25), while Hamabe relates to the field of cellular mobile communication system that includes wireless packet communication link; therefore they are same field and combinable to one of ordinary skill in the art.

b. The Applicant argued that the probability determinations are not inherent (See Remark, page 11). In response to the Applicant's argument, selecting transmission power in sequential steps from a minimum transmission power level (first power level) up to a maximum transmission power (second power level), as cited by Hamabe, will inherently minimize average power consumption taking into account the first power level and the second power level. This is mathematical determination and is not guess. Second, failed transmission occurs due to many factors such as power, interference level, noise ... etc, and if power is the only factor taking into consideration of failed transmission, minimum power transmission inherently corresponds to a maximum probability of failed transmission. This is also logical determination and is not guess. For those reasons, the Examiner respectfully disagrees with the Applicant's argument and remains the same rejection.

c. The Applicant argued that the Examiner rejects the real time limitation of claim 21 as obvious without support in the references (See Remark, page 12). In response to the Applicant's argument, the Examiner does not reject the real time

Art Unit: 2682

limitation as obvious because the cited reference (Flammer) does disclose a real-time system wherein the source node and the target node establish wireless packet communication link in real time (See fig. 6). Unless the Applicant defines clearly the limitation "real-time", otherwise the Examiner remains the same rejection and respectfully disagrees with the Applicant's argument.

d. The Applicant argued that Flammer shows only one re-transmission (See remark, page 13). The Examiner respectfully disagrees with the Applicant's argument because fig. 5 of Flammer does show a plurality of re-transmissions.

e. The Examiner would like to present U.S. Patent 5,266,922 as evidence to support for the Examiner's obvious statement that "forward error correction", and further the technique of embedding the "forward error correction" in the transmitted packet are well known in the art (See fig. 3B and col. 3 lines 3-42) upon the Applicant's request.

f. The Applicant argued that Flammer shows only one re-transmission (See remark, page 13). The Examiner respectfully disagrees with the Applicant's argument because fig. 5 of Flammer does show a plurality of re-transmissions wherein the number of transmissions (threshold number) is inherently limited by the battery capacity. Unless the Applicant defines clearly the limitation "threshold number", otherwise the Examiner remains the same rejection and respectfully disagrees with the Applicant's argument.

h. The Examiner would like to present U.S. Patent 6,069,901 as evidence to support for the Examiner's obvious statement that "retransmission information upon



Art Unit: 2682

receiving NAK at the same power" is well known in the art (See col. 2 lines 26-40) upon the Applicant's request.

i. Claim 32 is rejected for the same reasons as set forth in claim 5 (See above rejection for details).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan Tran** whose telephone number is **(703) 605-4255**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Vivian Chin**, can be reached at **(703) 308-6739**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Art Unit: 2682

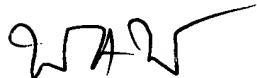
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)


Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Tuan Tran

Au 2682



VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600